

REMARKS

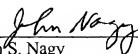
Claims 1-32 have been canceled. New claims 33-48 have been added and are pending in the application. In the previously filed Preliminary Amendment, new claim 33 recited "distal" in line 23 whereas it should have recited "proximal." New claim 33 as now presented corrects the error. No new matter has been entered. Support for the claims can be found in the specification and drawings. More specifically, but without limitation, support for claims 33-48 can be found at pages 29-33 and in FIGS. 12-13.

The Examiner should be aware that the specification for the grandparent to the present application, namely U.S. Serial No. 09/882,989 filed June 14, 2001, has handwritten notations throughout which include corrections to several reference numbers in the drawings, and at page 42, a clarification with respect to guide wire 96. More specifically, the handwritten notation on page 42, lines 24-25, refer to the guide wire 96 being "carried in lumen 95 as the catheter is" advanced along guide wire 99. It is believed that the handwritten notations to the reference numbers and reference to guide wire 96 are for clarification purposes and do not constitute new matter. Unfortunately, the handwritten notations were not formal amendments made in the originally-filed application U.S. Serial No. 08/910,857 filed August 13, 1997. The handwritten notations made their first appearance when U.S. Serial No. 09/412,113 was filed October 5, 1999. The handwritten notations and the changes to the reference numbers have been submitted in this Preliminary Amendment as changes to the specification. It is verily believed that no new matter is being presented.

It is respectfully requested that the application be examined at the earliest possible convenience.

Respectfully submitted,

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IN THE SPECIFICATION

On page 1, after the title of the invention, insert the following new paragraph:

This application is a continuation of U.S. Serial No. 09/882,989 filed April 24, 2001, which is a continuation U.S. Serial No. 10/353,116 filed January 27, 2003, which is a continuation of U.S. Serial No. 09/412,113 filed October 5, 1999 now U.S. Patent No. 6,264,682, which is a continuation of U.S. Serial No. 08/910,857 filed August 13, 1997 now U.S. Patent No. 6,165,195.

Please enter the following substitute paragraph for the specification at page 20, line 15 as follows:

FIG. 35 is an elevational view depicting the stent of FIG. ~~35~~ 34 combined to form a stent having a heavy stent cell density in all portions.

Please enter the following substitute paragraph for the specification at page 29, line 37 and page 30, line 8 as follows:

Other preferred embodiments for implanting main-vessel stent 20 in main-vessel 6 are depicted, for example, in FIGS. 12D-12F. This embodiment is identical to that depicted in FIGS. 12A-12C, with the addition of ramp 57 which is mounted on balloon ~~35-35~~ and provides a slight incline for guide wire 56A as it exits guide wire lumen 55A. As the guide wire slides along ramp 57, distal portion 56B of the guide wire will move radially outwardly which helps position the guide wire and orient it into the

side-branch vessel. In another preferred embodiment for implanting the main-vessel stent in the main vessel, as depicted in FIGS. 12G-12I, guide wire lumen 55A passes underneath main-vessel stent 20 and on top of balloon 35 54. The distal end 55B curves along the balloon so that as guide wire 56B advances out of the distal end 55B of the lumen, it is travelling radially outwardly so that it can more easily locate and advance into the side-branch vessel 5.

Please enter the following substitute paragraph for the specification at page 30, line 16 and 19, as follows:

In still another preferred embodiment for implanting main-vessel stent 20 in the main-vessel 6, as depicted in FIGS. 12J-12L, guide wire lumen 55A is positioned under stent 20 and terminates at distal end 55B in the middle of aperture 25. The distal end ~~55A~~ 55B of the guide wire lumen will spring outwardly which facilitates advancing guide wire distal end 41B into the side branch vessel. A distal guide wire lumen 58 is attached to the balloon 35 54 outer surface and extends from aperture 25 to essentially the distal end of the catheter.

Please enter the following substitute paragraph for the specification at page 30, line 26 as follows:

In one preferred method of implanting main-vessel stent 20 in main-vessel 6, as depicted in FIGS. 12A-12I and 13A-13D, guide wire 41A remains in position in main-vessel 6, while the side-branch guide wire 36A is withdrawn from the patient.

Main-vessel catheter 50 is backloaded onto guide wire 41A by inserting proximal end ~~41B~~ 41C of the wire into the distal end of the catheter and into guide wire lumen 53A. Main-vessel catheter 50 is advanced over guide wire 41A and viewed under fluoroscopy until main-vessel stent 20 is positioned in main-vessel 6, just proximal to side-branch vessel 5. The distal end 56B of the integrated stent-positioning guide wire 56A is then advanced by the physician pushing on proximal end 56C from outside the body. The distal end 56B of wire 56A advances into and through positioning guide wire lumen 55A and passes underneath the proximal end of the main-vessel stent 20 and exits the angled portion 55B of the lumen and enters side-branch vessel 5. The main-vessel catheter 50 is then advanced distally into the main vessel until resistance is felt from the stent-positioning guide wire 56A pushing up against the ostium of the side-branch vessel. The stiffness of stent-positioning guide wire 56A causes the main-vessel catheter 50, with main-vessel stent 20 thereon, to rotate so that aperture 25 is facing the side-branch vessel 5 ostium and proximal angled stent 10 already implanted.

Please enter the following substitute paragraph for the specification at page 42, line 34 as follows:

In the preferred method of stenting the bifurcated vessels, as shown in FIGS. 29 to 33, guide wire 99, previously positioned distal to the bifurcation in one limb (perhaps the most vulnerable to problems for wire recrossing), is back loaded into lumens 98A and 98B and catheter 90 is advanced over wire 99 so that the catheter is advanced distally beyond the bifurcation. Guide wire 96 which has been contained in lumen 95 to

this point, is carried in lumen 95 as the catheter is advanced along guide wire 99. Wire 99 is then withdrawn until its distal end pulls out of the distal section 98A. As guide wire 99 is pulled back (proximally), the first and second expandable members 91,92, which are normally biased apart, are released and now spring apart. The wire whose lumen is most distant (lateral) to the bifurcation (in this case wire 96) is then advanced into the distal vessel and the other wire (in this case 99) withdrawn as seen in FIG. 29B. The catheter is then withdrawn proximally so that the expandable members 91,94A 92 are now proximal to the bifurcation as depicted in FIG. 29C and the other guide wire (in this case wire 99) advanced into the other limb of the bifurcation as shown in FIG. 30. Catheter 90 is then advanced distally over both guide wires 96 and 99, as shown in FIG. 31, until stent 100 is positioned in the bifurcation of the intersection of the vessels 105,106. Due to the appropriate wire selection, rotation of no more than 90° will be required. Stent 100 is implanted by inflating expandable members 91,92 in a known manner. The expandable members are then deflated, and the catheter is withdrawn from the patient. The novel arrangement of guide wires 96 and 99 and their respective lumens permit single unit transport of a Y stent to the distal target site without wire wrapping problems and it allows for minimal requirements of rotation of the device (less than 90°) for optimal deployment (allowing minimal twist deformity). The guide wires may be left in place for further intervention such as finishing the stents with simultaneous high pressure balloon inflation.